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WATER SUPPLY OUTLOOK FOR MONTANA

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U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

MONTANA AGRICULTURAL EXPERIMENT STATION

AS OF
MAR. 1, 1977

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: SNOW COURSE MEASUREMENTS BY A SURVEY TEAM IN UTAH'S WASATCH RANGE.
ORC-254-10

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, 6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1220 S.W. Third Ave., Portland, Oregon 97204
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

USDA-SCS-PORTLAND OR 1978

WATER SUPPLY OUTLOOK FOR MONTANA

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

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USDA-SCS-PORTLAND, OR 8-76 M7-L-220249

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WARNING

You may have less Irrigation water this year than ever before.

SNOW COURSE MEASUREMENTS MADE ON MARCH 1, 1977 CONTINUE TO INDICATE THAT MANY AREAS WILL HAVE SEVERE TO CRITICAL WATER SHORTAGES. STUDY THE ATTACHED WATER SUPPLY FORECAST CAREFULLY FOR STREAM FLOW AND/OR RESERVOIR STORAGE FIGURES THAT CONCERN YOUR AREA. KEEP IN TOUCH WITH YOUR IRRIGATION DISTRICT OR OTHER OFFICIALS FOR ESTIMATES OF THE SUPPLY AVAILABLE FOR YOU. YOU MAY FIND YOU'LL NEED TO CHANGE CROPS, PLANTED ACREAGE, TIMING OF WATER APPLICATION OR EFFICIENCY OF YOUR WATER DISTRIBUTION SYSTEM. THESE ARE SOME OF THE EARLY DECISIONS AND PLANS YOU MAY HAVE TO MAKE:

1. Change to crops which require less water.

2. Reduce the crop acreage. Naturally, this will affect the fertilizer you order and the amount of seed you buy. Be sure unplanted land has cover crops to prevent wind erosion.

3. Check out your irrigation systems carefully. Make certain that ditches have no water-wasting weeds or debris to slow delivery; that sprinkler heads don't have leaks, pipes have tight connections and pumps work properly. If new parts or equipment are needed, purchase them soon.

4. Plant only the best land - it makes most efficient use of water. If your soil has been mapped, local Soil Conservation Service personnel can guide you. If not mapped, they can still give you general information.

5. Maintain close contact with the Soil Conservation Service or your local Conservation District for the latest water supply forecasts, and for soil information. SCS has just published water conservation TIPS pamphlets for irrigators, farmers and ranchers. Get copies.

6. Maintain close contact with the Agricultural Stabilization and Conservation Service county office. Funds for cost sharing on special water stretching practices may be made available because of the drought situation. ASCS also administers the Federal Disaster Assistance program.

7. Do the same with your closest Farmers Home Administration office. Special loans may become available.

8. Do the same with the local Cooperative Extension Service office for current information on crops, feed supply and marketing.

SCS, ASCS AND FMHA ARE LISTED IN THE PHONE BOOK UNDER "U.S. GOVERNMENT, AGRICULTURE, DEPARTMENT OF." THE EXTENSION SERVICE IS USUALLY LISTED WITH LOCAL COUNTY OFFICES.

MONTANA WATER SUPPLY OUTLOOK

March 1

Water supply conditions have deteriorated the past month even with the storm activity near the first of March. Snowfall on the mountain watersheds was very light until the last few days in February and the first few days of March. Some mountainous areas received one to four feet of new snow during this storm period.

Small mountain ranges in central Montana and the north end of the Bighorn Mountains continue to receive good precipitation.

Areas west and north of the Kootenai River and areas along the continental divide east of Lemhi Pass into Yellowstone National Park, near Butte and north of Marias Pass to the Canadian border have less than 30 percent of average snowpack. Headwater areas of the Gallatin, Smith, Belt, Judith, Musselshell and Shields Rivers have 50 to 70 percent average snow storage. Snow water content in the Crazy and Castle Mountains is 70 to 90 percent average.

The water equivalent at about 75 percent of the snow courses in Montana is minimum of record.

Most streams are forecast to have spring and summer runoff that is second to fourth lowest of record. Mid and late season irrigation supplies are expected to be short.

COLUMBIA RIVER DRAINAGE

Snow - The mountain snowpack continues well below average. Most snow courses have the lowest water content of record. Storms around the first of March added moisture to the snowpack but increases were much less than the deficit caused by low snowfall in February.

Mountains north and west of the Kootenai River and along the continental divide have less than 30 percent of normal water content in the snow.

The Swan River area has snowpack a little more than one-half of average. All other areas range from 30 to 50 percent snow water storage.

Streamflow - Most streams are forecast to have runoff that is third or fourth lowest of record. The Kootenai River is expected to have runoff similar to 1973 and a little above the low years of 1941 and 1944.

The Upper Clark Fork runoff should be comparable to 1940 and a little more than 1941, 1944 and 1973. The forecasted flow in the Bitterroot River near Darby is lower than any flow measured since records started in 1973.

The snow melt period is expected to be short this season. Streamflow will drop to base flow levels earlier than usual this summer and summer flows will be less than normal.

Irrigation water supplies will be very short through July and August on streams not having stored water.

MISSOURI RIVER DRAINAGE

Snow - With the exception of the Bearpaw, Highwood, Snowy, Castle and Crazy Mountains, the water content of the snowpack is well below average. Portions of the Gallatin, Belt, Smith, Judith and Musselshell Rivers have snow that is 50 to 70 percent average. Most areas have only 30 to 50 percent of the normal amount of water stored in the headwater snowpack. Extremely low snow cover, less than 30 percent average, encompasses the headwaters of the Marias, St. Marys, Beaverhead Rivers, and portions of the Big Hole, Madison, and Boulder Rivers.

Most snow courses west of the Missouri River and the Gallatin-Madison divide have the lowest water content of record.

Streamflow - Most streams are forecast to have runoff near the previous recorded lows. In the Missouri River headwaters, streamflow is forecast to be like the years of 1961 and 1973. The Big Hole River and

Gallatin River at Logan, and Missouri River are predicted to have runoff less than or near previously recorded lows.

Streams having headwaters along the continental divide north of Helena, are forecast to have the second or third lowest of record above the years of 1941 and 1944 and similar to 1973. Streams originating in the small mountain ranges of central Montana will have runoff well above the low levels of other areas.

Irrigation water supplies from streams in the Missouri River headwaters and streams originating on the continental divide will be much lower than usual in July and August. Some shortages may even occur in late June. Most reservoirs are expected to fill and this stored water will help provide late season supplies were it is available.

YELLOWSTONE RIVER DRAINAGE

Snow - The poorest snow conditions are above Yellowstone Lake where water contents of the snow is less than 30 percent of average. The snow in the remaining portion of Yellowstone and Clarks Fork Rivers in Wyoming is 30 to 40 percent average. Snowpack in the Montana mountain ranges is generally 50 to 60 percent average, except for 80 to 90 percent snow cover in the Crazy Mountains and average or above snow in the northern part of the Bighorn mountains. Many snow courses in and near Yellowstone National Park have the lowest water content of record.

Streamflow - Most streams are forecast to have the lowest or near the lowest April-through-September runoff of record. Many streamflow stations have over 40 years of records. Runoff this season is expected to be similar to most recent dry years of 1960, 1961 and 1966. Exceptions are the Little Big Horn River where near average runoff is

forecast and Tongue and Power Rivers where streamflow is expected to be 10 to 15 percent below average.

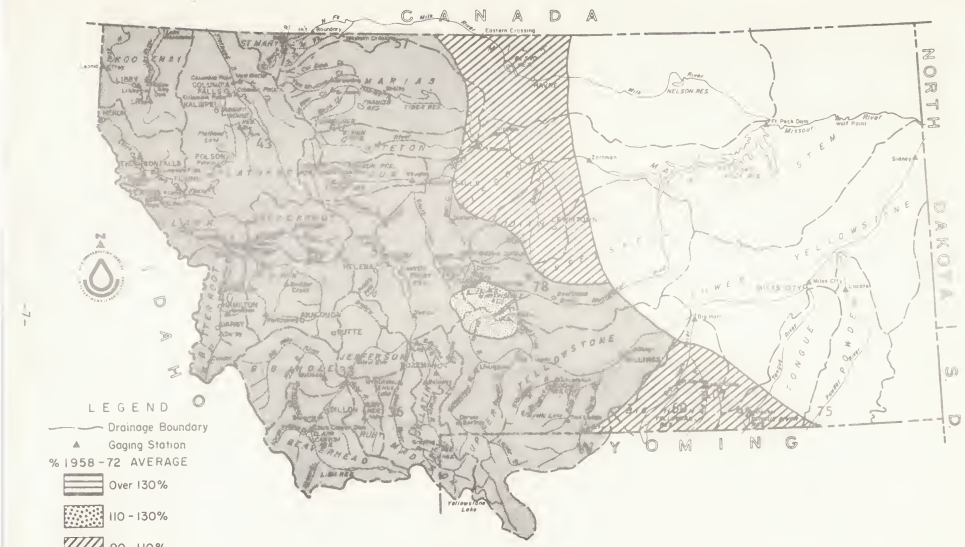
Irrigation water supplies in smaller streams above Billings will be in short supply starting in late June. Where available, stored irrigation water will help ease the low supply.

The main Yellowstone should have enough water to supply irrigation needs, but it may be necessary to raise diversion dams for water to flow in the ditches and lower pumps to the water level.

CANADA
NORTH DAKOTA
S. D.
WYOMING
MILK
MARIAS
BIG HORN
YELLOWSTONE
MUSSELSHELL
MISSOURI
JEFFERSON
GALLATIN
MADISON
BEAVERHEAD
RUBY
RED ROCK
CLARK FORK
KOOTENAI
FLATHEAD
BOULDER
BIG HOLE
BIGHORN
MILES CITY
HELENA
BILLINGS
BUTTE
BOZEMAN
DILLON
LIBBY
KALISPELL
HAVRE
GLASGOW
WOLF POINT
SCOBEY
CIRCLE
GLENDIVE
SIDNEY
FORSYTH
LEWISTOWN
GREAT FALLS
CUT BANK
SHELBY
CHINOOK
HARLEM
MALTA
N
LEGEND
Drainage Boundary
Gaging Station
% 1958 - 72 AVERAGE
Over 130%
110 - 130%
90 - 110%
70 - 90%
Under 70%
PROSPECTIVE STREAMFLOW FORECASTS
AS OF
March 1, 1977
MONTANA
50 0 50 100
SCALE IN MILES

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average
COLUMBIA RIVER DRAINAGE			
Kootenai	40	36	37
Flathead	21	46	43
Upper Clark Fork	34	33	40
Lower Clark Fork	11	32	34
Bitterroot	6	31	40
MISSOURI RIVER DRAINAGE			
Jefferson	46	28	33
Madison	24	30	36
Gallatin	18	46	52
Missouri Main Stem	12	47	52
Judith-Musselshell	11	78	78
Marias-Teton-Sun	12	38	40
Milk	3	75	57
YELLOWSTONE RIVER DRAINAGE			
Yellowstone (above Bighorn)	29	45	54
Bighorn	29	55	60
Little Bighorn	7	105	107
Tongue	9	90	92
Powder	5	66	75
SASKATCHEWAN RIVER DRAINAGE			
Bow	4	54	52
St. Mary's	2	27	25



MOUNTAIN SNOW WATER EQUIVALENT
AS OF
March 1, 1977

M17-0-211388-1

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (inches)		Date of Survey	Soil Moisture (inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average +
COLUMBIA RIVER BASIN							
Kootenai							
Baree Trail	3800	48	7.5	2-28	4.7	-	6.3
Murphy Lake R. S.	3000	48	22.6	3-3	19.4	19.3	20.1
Raven	3050	48	23.0	3-1	14.0	16.7	18.5
Flathead							
Desert Mountain	5600	54	8.4	2-25	5.3	8.7	7.3
Marias Pass	5250	54	6.5	2-20	4.2	6.2	5.4
Clark Fork							
Black Pine	7100	48	10.0	2-28	6.5	8.2	7.5
Lubrecht Forest	4100	48	26.8	3-1	14.0	23.6	16.4
Seeley Lake R. S.	4030	48	11.9	3-1	4.8	11.4	8.4
Skalkaho Summit	7260	48	10.8			10.4	9.7
Bitterroot							
Gibbons Pass	7100	48	7.1	2-23	2.9	5.9	4.9
Lolo Pass	5250	48	10.6	2-25	7.4	7.1	6.0
MISSOURI RIVER BASIN							
Beaverhead							
Lakeview	6700	48	15.3	2-28	8.1	10.8	9.8
Madison							
West Yellowstone	6700	48	6.5	3-1	1.3	1.8	2.4
Gallatin							
Bridger Bowl	7250	48	17.0	2-23	15.6	16.0	16.0
College Site No. 2	4860	48	17.7	2-25	8.6	16.8	14.2
Lick Creek	6860	48	18.8	2-25	12.3	14.2	15.7
Twenty-One Mile	7150	48	10.0	3-1	2.2	3.2	4.2
Missouri Main Stem							
Kings Hill	7420	48	11.8	2-23	4.4	7.6	6.9
Stemple Pass	6350	48	5.9	3-1	3.6	5.3	4.1
Milk							
Beaver Creek	3950	48	20.9	2-26	9.3	8.6	9.8
Rocky Boy	4700	36	10.1	2-26	7.0	7.5	7.1
Yellowstone							
Battle Ridge	6020	48	17.6	2-23	9.6	12.8	13.4
Northeast Entrance	7350	48	9.4	3-2	4.3	4.9	5.8
PMC Dryland	3700	48	20.7	2-28	5.8	7.1	6.9

+ Average for period of record.

RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH

Basin or Stream	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average
COLUMBIA RIVER BASIN					
Kootenai	Koocanusa	5,694.0	2,770.0	1,716.0	--
Flathead	Hungry Horse	3,428.0	2,326.0	2,570.0	2,329.0
	Flathead Lake	1,791.0	703.8	925.5	1,009.0
	Camas (4)	45.2	15.6	18.1	24.5
	Mission Valley (8)	100.3	46.7	57.1	34.9
Clark Fork	Georgetown Lake	31.0	28.1	27.8	25.4
	Lower Willow Creek	4.9	2.6	3.2	1.2
	Nevada Creek	12.6	5.5	--	5.6
	Noxon Rapids	334.6	290.0	261.8	300.6
Bitterroot	Como	34.9		24.5	13.7
	Painted Rocks	31.7	4.5	30.3	21.3
MISSOURI RIVER BASIN					
Beaverhead	Clark Canyon	257.2	162.3	150.4	141.4
	Lima	84.0	--	46.9	31.9
Ruby	Ruby	38.8	25.0	--	27.4
Madison	Hebgen Lake	337.5	232.7	288.3	202.6
	Ennis Lake	41.0	33.0	35.4	37.6
Gallatin	Middle Creek	8.0	3.6	3.9	3.6
Missouri	Canyon Ferry	2,043.0	1,727.0	1,693.0	1,608.0
	Hauser & Helena	61.9	61.3	62.5	57.4
	Lake Helena	10.4	10.2	10.7	9.0
	Holter Lake	81.9	79.5	79.0	51.2
	Smith River	10.6	10.5	9.6	6.3
	Bair	7.0	4.4	--	4.7
	Martinsdale	23.1	15.4	--	7.5
	Deadman's Basin	72.2	--	53.8	46.6
	Fort Peck Lake	18,910.0	15,940.0	17,340.0	13,110.0
Sun	Gibson	99.0	69.9	69.4	42.2
	Willow Creek	32.2	27.2	28.1	19.5
	Pishkun	32.0	16.4	17.6	17.4
Marias	Lower Two Medicine	11.9	--	--	--
	Four Horns	19.2	--	--	--
	Swift	30.0	19.3	17.7	17.9
	Lake Frances	111.9	78.2	94.0	78.3
	Tiber	1,347.0	495.0	570.8	576.8
Milk	Beaver Creek	3.5	2.1	1.3	--
	Fresno	127.2	67.7	117.3	56.8
	Nelson	66.8	45.6	49.8	41.2
	Lake Sherburne	66.2	16.2	33.1	21.9
Yellowstone	Mystic Lake	21.0	1.8	3.5	7.9
	Tongue River	68.0		37.6	32.6
	Cooney	27.4	14.6	12.0	14.7
Bighorn	Bighorn Lake	1,356.0	870.0	835.9	800.8

Average based on 1958-72 period.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
COLUMBIA RIVER BASIN					
KOOTENAI RIVER					
Libby (near)(2)	4,100	55	Apr-Sept	8,012	7,456
Below Libby Dam	3,400	53	Apr-July	6,262	6,417
	2,700	54	Apr-June	4,593	5,011
FISHER RIVER					
Libby (near)	100	35	Apr-Sept		286
	90	33	Apr-July		269
YAAK RIVER					
Troy (near)	250	44	Apr-Sept		568
	220	40	Apr-July		544
KOOTENAI RIVER					
Leonia (at)(2)	4,900	54	Apr-Sept		9,073
	4,200	53	Apr-July		7,957
	3,450	54	Apr-June		6,431
INFLOW MOULTON RESERVOIR					
Butte (near)(million gallons)	100	45	Apr-June	444	220
WARM SPRINGS CREEK AT MEYERS DAM					
Anaconda (near)(3)	25.5	50	Apr-Sept	74.6	50.9
	20.0	48	Apr-July	61.6	41.8
FLINT CREEK					
Southern Cross (near)(4)	7.1	42	Apr-Sept	31.7	16.9
	5.8	41	Apr-July	26.2	14.3
FLINT CREEK					
Boulder Creek (below)(5)	33.0	46	Apr-Sept		71.6
	26.0	46	Apr-July		56.1
INFLOW LOWER WILLOW CREEK RESERVOIR					
Hall (near)(6)	5.5	34	Apr-Sept	28.0	16.2
	5.0	32	Apr-July	26.7	15.4
MIDDLE FORK ROCK CREEK					
Philipsburg (near)	35.0	46	Apr-Sept		75.9
	30.0	44	Apr-July		68.6
NEVADA CREEK					
Finn (near)	5.5	25	Apr-Sept		21.6
	5.0	25	Apr-July		20.1

(2) Adjusted for storage in Lake Koocanusa.
(3) Adjusted for storage in Silver Lake, diversions to and pumping from Georgetown Lake.
(4) Adjusted for storage in Georgetown Lake, diversions from and pumping to Silver Lake.
(5) Sum Flint Creek at Maxville and Boulder Creek at Maxville.
(6) Sum of North Fork Lower Willow Creek near Hall and South Fork Lower Willow Creek near Hall.

Average based on 1958-72 period.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
COLUMBIA RIVER BASIN (Continued)					
BLACKFOOT RIVER					
Bonner (near)	470	46	Apr-Sept		1,031
	390	42	Apr-July		934
	320	39	Apr-June		814
CLARK FORK RIVER					
Milltown (above)(7)	350	44	Apr-Sept		792
	290	42	Apr-July		690
	240	41	Apr-June		590
CLARK FORK RIVER					
Missoula (above)	820	45	Apr-Sept	2,649	1,823
	680	42	Apr-July	2,389	1,624
	560	40	Apr-June	2,106	1,404
WEST FORK BITTERROOT RIVER					
Conner (near)(8)	78.0	45	Apr-Sept		172
	70.0	45	Apr-July		156
BITTERROOT RIVER					
Darby (near)	255	44	Apr-Sept	836	584
	230	42	Apr-July	758	542
	200	42	Apr-June	666	479
SKALKAHO CREEK					
Hamilton (near)	30.0	53	Apr-Sept		56.6
	25.0	50	Apr-July		49.6
BURNT FORK CREEK					
Stevensville (near)(9)	20.0	57	Apr-Sept		35.3
	17.0	55	Apr-July		31.0
BITTERROOT RIVER					
Missoula (at)(10)	650	43	Apr-Sept		1,527
	580	41	Apr-July		1,412
	520	42	Apr-June		1,236
CLARK FORK RIVER					
Missoula (below)	1,470	44	Apr-Sept		3,350
	1,260	42	Apr-July		3,036
	1,080	41	Apr-June		2,640
CLARK FORK RIVER					
St. Regis (at)	1,900	42	Apr-Sept	6,119	4,507
	1,660	41	Apr-July	5,504	4,087
	1,450	41	Apr-June	4,794	3,563
NORTH FORK FLATHEAD RIVER					
Columbia Falls (near)	1,050	53	Apr-Sept		1,991
	950	52	Apr-July		1,813
	820	53	Apr-June		1,551

(7) Difference in observed flow Clark Fork above Missoula and Blackfoot near Bonner.
(8) Adjusted for storage in Painted Rocks Reservoir.
(9) Adjusted for diversion into Sunset Highline Canal.
(10) Difference in observed flow Clark Fork above and below Missoula.

Average based on 1958-72 period.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
COLUMBIA RIVER BASIN (Continued)					
MIDDLE FORK FLATHEAD RIVER					
West Glacier (near)	1,200	63	Apr-Sept	1,982	1,917
	1,100	62	Apr-July	1,779	1,768
	980	65	Apr-June	1,458	1,514
SOUTH FORK FLATHEAD RIVER					
Columbia Falls (near)	1,450	61	Apr-Sept	2,489	2,378
	1,350	60	Apr-July	2,345	2,240
	1,220	61	Apr-June	2,038	1,984
FLATHEAD RIVER					
Columbia Falls (at) (11)	3,800	59	Apr-Sept	6,785	6,421
	3,500	59	Apr-July	6,176	5,942
	3,100	60	Apr-June	5,200	5,151
SWAN RIVER					
Big Fork (near)	370	52	Apr-Sept		717
	320	51	Apr-July		630
FLATHEAD RIVER					
Polson (near)(12)	4,200	55	Apr-Sept	8,187	7,648
	3,850	54	Apr-July	7,343	7,082
	345	56	Apr-June	6,160	6,113
CLARK FORK RIVER					
Plains (near)(12)	6,200	49	Apr-Sept	14,454	12,601
	5,560	48	Apr-July	12,967	11,523
	4,800	48	Apr-June	10,996	9,934
THOMPSON RIVER					
Thompson Falls (near)	102	37	Apr-Sept		277
	90	36	Apr-July		248
PROSPECT CREEK					
Thompson Falls (at)	55.0	37	Apr-Sept		147
	50.0	36	Apr-July		137
CLARK FORK RIVER					
Whitehorse Rapids (at)(13)	6,800	48	Apr-Sept		14,083
	6,160	48	Apr-July		12,852
	5,300	48	Apr-June		11,092

(11) Adjusted for storage in Hungry Horse Reservoir.
(12) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.
(13) Adjusted for storage in Hungry Horse Reservoir, Flathead Lake, and Noxon Rapids Reservoirs.

Average based on 1958-72 period.

STREAMFLOW FORECASTS

BASIN, STREAM and or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
MISSOURI RIVER BASIN					
BEAVERHEAD RIVER					
Grant (near)(14)	37.0	26	Apr-Sept	244	145
	35.0	28	Apr-July	202	127
RUBY RIVER					
Alder (near)	49.0	52	Apr-Sept		93.9
	38.0	48	Apr-July		79.4
BIG HOLE RIVER					
Melrose (near)	270	36	Apr-Sept		748
	250	36	Apr-July		694
BIRCH CREEK					
Glen (near)	6.6	48	Apr-Sept		13.7
	5.0	43	Apr-July		11.5
BOULDER RIVER					
Boulder (near)	38.0	42	Apr-Sept	145	89.5
	36.0	42	Apr-July	134	85.3
WILLOW CREEK					
Harrison (near)	5.0	26	Apr-Sept		18.9
	4.5	26	Apr-July		17.1
MADISON RIVER					
Grayling (near)(15)	315	66	Apr-Sept	575	480
	240	64	Apr-July	449	374
MADISON RIVER					
McAllister (near)(16)	530	65	Apr-Sept	994	828
	410	63	Apr-July	792	652
GALLATIN RIVER					
Gateway (near)	320	60	Apr-Sept		531
	275	61	Apr-July		451
INFLOW MIDDLE CREEK RESERVOIR					
Bozeman (near)(17)	18.9	67	Apr-Sept		28.2
	16.0	66	Apr-July		24.4
HYALITE CREEK					
Bozeman (near)(18)	29.0	66	Apr-Sept		44.2
	25.0	65	Apr-July		38.2
GALLATIN RIVER					
Logan (at)	230	40	Apr-Sept		573
	185	38	Apr-July		487

(14) Adjusted for storage in Lima and Clark Canyon Reservoirs.
(15) Adjusted for storage in Hebgen Lake.
(16) Adjusted for storage in Hebgen and Ennis Lakes.
(17) Sum of West Fork Hyalite Creek and East Fork Hyalite Creek above Reservoir.
(18) Adjusted for storage in Middle Creek Reservoir.

Average based on 1958-72 period.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
MISSOURI RIVER BASIN (Continued)					
MISSOURI RIVER					
Toston (at)(19)	1,020	42	Apr-Sept	3,517	2,432
	845	40	Apr-July	3,168	2,109
SHEEP CREEK					
White Sulphur Springs (near)	14.6	71	Apr-Sept	25.2	20.6
	12.5	69	Apr-July	21.9	18.0
SUN RIVER					
Gibson Dam (at)(20)	290	49	Apr-Sept	703	590
	260	48	Apr-July	643	541
BELT CREEK					
Monarch (near)	80.0	65	Apr-Sept		123
	70.0	66	Apr-July		113
MISSOURI RIVER					
Fort Benton (at)(21)	1,500	41	Apr-Sept		3,690
	1,150	37	Apr-July		3,123
TWO MEDICINE CREEK					
Browning (near)(22)	130	51	Apr-Sept		253
	125	52	Apr-July		240
BADGER CREEK					
Browning (near)	72.0	55	Apr-Sept		130
	60.0	53	Apr-July		113
MARIAS RIVER					
Shelby (near)(23)	200	36	Apr-Sept		599
	180	33	Apr-July		538
MISSOURI RIVER					
Virgelle (at)(24)	1,750	40	Apr-Sept		4,342
	1,350	36	Apr-July		3,742
SOUTH FORK JUDITH RIVER					
Utica (near)	9.5	64	Apr-Sept		14.9
	8.4	61	Apr-July		13.7
MISSOURI RIVER					
Landusky (near)(24)	1,800	38	Apr-Sept		4,739
	1,400	34	Apr-July		4,068

(19) Adjusted for storage in Hebgen and Ennis Lakes and Clark Canyon Reservoir.
(20) Adjusted for storage in Gibson Reservoir and diversions.
(21) Adjusted for storage in Canyon Ferry Reservoir.
(22) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.
(23) Adjusted for storage in Two Medicine, Four Horns, Lake Frances, and Swift Reservoir.
(24) Adjusted for storage in Canyon Ferry and Tiber Reservoirs.

Average based on 1958-72 period.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
MISSOURI RIVER BASIN (Continued)					
NORTH FORK MUSSELSHELL RIVER					
Delpine (near)	3.9	63	Apr-Sept		6.2
	3.3	61	Apr-July		5.4
SOUTH FORK MUSSELSHELL RIVER					
Martinsdale (above)	34.0	68	Apr-Sept		50.1
	32.0	68	Apr-July		47.3
MISSOURI RIVER					
Fort Peck Dam (below)(25)	1,500	33	Apr-Sept		4,598
	1,250	31	Apr-July		4,069
MILK RIVER					
Eastern Crossing (at)	195	68	Mar-Sept		286
MISSOURI RIVER					
Wolf Point (near)(25)	1,600	33	Apr-Sept		4,898
	1,300	30	Apr-July		4,361
MISSOURI RIVER					
Williston, N.D. (near)(31)	4,600	39	Apr-Sept		11,778
	4,100	39	Apr-July		10,437
SASKATCHEWAN RIVER BASIN					
ST. MARY RIVER					
Babb (near)(32)	310	63	Apr-Sept		490
	255	61	Apr-July		421

(25) Adjusted for storage in Canyon Ferry, Tiber, and Fort Peck Reservoirs.
(31) Adjusted for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Bill, Boysen and Yellowtail Reservoirs. Sum Yellowstone River near Sidney and Missouri River near Culbertson.
(32) Adjusted for storage in Lake Sherburne.

Average based on 1958-72 period.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
YELLOWSTONE RIVER BASIN					
YELLOWSTONE RIVER					
Corwin Springs (at)	1,200	60	Apr-Sept	2,453	1,996
	980	59	Apr-July	2,089	1,662
YELLOWSTONE RIVER					
Livingston (near)	1,280	55	Apr-Sept		2,317
	1,050	55	Apr-July		1,926
BOULDER RIVER					
Big Timber (at)	220	58	Apr-Sept		379
	210	60	Apr-July		350
STILLWATER RIVER					
Absarokee (near)(26)	340	58	Apr-Sept		591
	280	57	Apr-July		494
CLARKS FORK RIVER					
Belfry (near)	370	61	Apr-Sept		607
	350	64	Apr-July		546
ROCK CREEK					
Red Lodge (near)	69.0	63	Apr-Sept	133	110
	50.0	60	Apr-July	104	84.0
INFLOW COONEY RESERVOIR					
Boyd (near)(27)	23.0	45	Apr-Sept		51.5
	18.0	44	Apr-July		41.1
YELLOWSTONE RIVER					
Billings (at)	2,350	55	Apr-Sept	5,711	4,246
	1,990	55	Apr-July	4,876	3,613
BIGHORN RIVER					
St. Xavier (near)(28)	600	32	Apr-Sept	2,077	1,849
	520	30	Apr-July	1,846	1,706
LITTLE BIGHORN RIVER					
Lodgegrass (near)(29)	160	110	Apr-Sept		146
	144	112	Apr-July		129
YELLOWSTONE RIVER					
Miles City (at)(30)	3,000	47	Apr-Sept		6,378
	2,600	47	Apr-July		5,555
YELLOWSTONE RIVER					
Sidney (near)(30)	3,100	46	Apr-Sept		6,665
	2,700	46	Apr-July		5,895

(26) Adjusted for storage in Mystic Lake.
(27) Sum of Red Lodge Creek above Reservoir and Willow Creek near Boyd.
(28) Adjusted for storage in Buffalo Bill, Boysen, Bull Lake and Yellowtail
(29) Sum Little Bighorn below Pass Creek and Lodgegrass Creek near Wyola.
(30) Adjusted for storage in Buffalo Bill, Boysen and Yellowtail Reservoirs.

Average based on 1958-72 period.

SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Elevation	THIS YEAR: Date of Survey	THIS YEAR: Snow Depth (Inches)	THIS YEAR: Water Content (Inches)	PAST RECORD: Water Content (inches): Last Year	PAST RECORD: Water Content (inches): Average
AMBROSE	6480	3/02	25	4.7	15.0	11.7
ARCH FALLS	7350	2/25	25	5.2	13.9	10.9
BALD EAGLE PEAK	5700	2/23	56	19.0	-	60.1
BALD RIDGE	7500	2/28	40	9.9	13.0	11.3
BANFIELD MOUNTAIN	5600	2/24	22	5.2	22.6	23.2
BANFIELD MOUNTAIN PILLOW	5600	2/24	SP	6.3	21.4	19.4
BAREE CREEK	5500	2/28	56	19.5	53.4	43.6
BAREE MIDWAY	4600	2/28	52	16.5	37.3	34.6
BAREE TRAIL	3800	2/28	6	1.0	11.5	10.5
BASIN CREEK	7180	2/25	13	2.0	11.4	-
BASSOO PEAK	5150	2/25	9	1.9	7.3	10.5
BATTLE RIDGE	6020	2/23	18	4.4	7.5	7.0
BEAGLE SPRINGS	8850	2/25	11	1.7	-	-
BEAR BASIN	8150	2/24	49	11.7	22.4	19.4
BEAR PAW SKI AREA	5200	2/26	24	6.6	3.7	6.3
BERRY MEADOW	7000	2/23	11	2.1	6.8	7.5
BIG COULEE	5100	2/22	23	6.4	3.7	-
BIG CREEK	6750	2/23	66	20.3	36.2	41.7
BIG SKY	7700	3/01	36	8.5	15.8	13.4
BIG SKY MEADOW	6350	2/24	22	4.7	11.4	8.0
BIG SNOWY	7150	2/25	58	15.8	16.3	15.0
BIG SPRINGS (ID)	6500	2/28	31	6.0	21.5	18.6
BLACK BEAR	7950	2/25	38	9.9	43.0	-
BLACK BEAR PILLOW	7950	2/25	SP	10.3	38.6	-
BLACK CANYON	7850	2/25	33	8.0	36.0	29.4
BLACK MOOSE (ID)	8120	2/25	33	9.2	39.4	36.2
BLACK PINE	7100	2/28	20	4.8	17.2	11.9
BLACK PINE PILLOW	7100	2/28	SP	5.2	18.7	11.7
BLOODY DICK	7600	2/24	17	3.6	16.2	12.1
BLOODY DICK PILLOW	7600	2/24	0	3.6	-	-
BOTS SOTS	8000	2/28	16	3.5	8.8	-
BOULDER MOUNTAIN	7950	2/22	28	7.4	21.2	16.3
BOULDER MOUNTAIN PILLOW	7950	2/22	0	6.7	-	-
BOW RIVER #1 (AL)	5100	3/02	20	4.4	7.9	8.1
BOX CANYON	6670	2/28	27	5.5	-	-
BRANHAM LAKES	8850	2/28	43	10.4	30.6	25.9
BRIDGER BOWL	7250	2/23	49	13.1	25.2	26.1
BRIDGER BOWL PILLOW	7250	2/23	SP	13.2	26.3	24.3
BRISTOW CREEK	3900	2/24	5	2.0	12.4	13.7
BRUSH CREEK TIMBER	5000	2/24	14	3.4	8.7	10.2
BULL MOUNTAIN	6600	2/28	9	2.0	5.6	-
CABIN CREEK	5200	2/25	13	3.1	5.5	7.2
CALL ROAD	8050	2/25	18	4.8	11.2	9.8
CALVERT CREEK	6450	2/25	19	3.2	12.4	9.1
CALVERT CREEK PILLOW	6450	2/25	SP	3.0	9.4	-
CAMP CREEK (ID)	6800	2/28	10	1.5	6.9	9.0
CAMP MISERY	6400	2/28	97	30.9	39.0	42.2
CAMP SENIA	7890	2/28	9	1.8	6.6	5.2

Average based On 1958-72 period. A - Aerial observation; water content estimated.
SP - Snow Pillow observation; water content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (inches)	Water Content (inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average
CANYON (WY)	7750	3/01	27	5.7	18.6	13.9
CARROT BASIN	9000	2/24	37	9.2	36.6	32.3
CARROT BASIN PILLOW	9000	2/24	SP	8.5	26.7	23.9
CARTER CREEK	7400	2/28	6	.8	5.2	4.4
CEDAR GROVE	4100	2/23	10	3.1	13.1	11.6
CHESSMAN RESERVOIR	6200	2/24	6	1.4	4.0	3.1
CHICKEN CREEK	4060	2/25	33	8.4	-	-
CLOVER MEADOW	8600	2/25	32	6.6	17.7	14.7
COLE CREEK	7850	3/01	32	8.4	15.7	-
COLE CREEK PILLOW	7850	3/01	SP	8.0	16.1	-
COLLEY CREEK	6300	3/01	27	6.1	9.2	-
COMBINATION	5600	2/28	12	2.0	7.2	6.7
COMBINATION PILLOW	5600	2/28	SP	3.4	7.0	-
COOKE STATION	8150	3/01	38	8.8	21.9	17.6
COPPER BOTTOM	5200	2/25	14	3.8	11.9	11.1
COPPER BOTTOM PILLOW	5200	2/25	SP	4.4	13.9	-
COPPER CAMP	6950	2/25	34	9.6	33.2	30.3
COPPER CAMP PILLOW	6950	2/25	SP	10.8	38.9	-
COPPER CREEK	5700	2/25	16	4.7	13.6	15.4
COPPER LAKE CREEK	6100	2/25	26	7.4	24.3	22.6
COPPER MOUNTAIN	7700	3/02	22	3.9	12.9	10.0
COTTONWOOD CREEK	6400	3/02	21	4.7	10.2	-
COYOTE HILL	4200	2/24	25	6.7	9.9	10.4
CREVICE MOUNTAIN	8400	2/28	33	6.8	11.9	9.2
CRYSTAL LAKE	6100	2/25	49	12.0	10.6	12.3
DAD CREEK LAKE	8400	2/25	16	3.0	15.1	11.9
DAISY PEAK	7600	2/28	27	5.5	12.0	10.3
DALY CREEK	5780	2/25	22	4.4	12.4	-
DAVIS CREEK	5400	2/22	22	4.7	18.6	23.8
DEADMAN CREEK	6450	2/23	31	9.0	10.0	11.4
DEADMAN CREEK PILLOW	6450	2/23	SP	8.0	9.4	9.8
DESERT MOUNTAIN	5600	2/25	27	7.0	13.5	14.7
DEVILS SLIDE	8100	2/25	48	12.8	22.4	20.2
DISCOVERY BASIN	7050	2/28	23	5.1	11.3	-
DIVIDE	7800	2/25	16	3.2	8.7	10.0
DIVIDE PILLOW	7800	2/25	SP	3.8	7.9	-
DIX HILL	6400	2/27	18	4.4	12.0	-
EL DORADO MINE	7800	2/24	33	7.4	27.1	18.7
ELK HORN SPRINGS	7800	3/01	17	3.3	11.0	8.4
ELK PEAK	8000	2/24	39	10.8	15.7	15.8
EMERY CREEK	4350	2/25	27	7.6	14.3	-
EMERY CREEK PILLOW	4350	2/25	SP	6.2	-	-
FATTY CREEK	5500	2/23	48	12.6	19.2	21.0
FISH CREEK	8000	2/25	14	2.8	12.7	-
FISHER CREEK	9100	3/01	58	17.2	39.3	32.6
FISHER CREEK PILLOW	9100	3/01	SP	17.0	40.0	30.5
FLEECER RIDGE	7500	2/28	18	3.7	13.0	-
FOUR MILE	6900	2/22	10	2.2	9.6	7.6
FOURTH OF JULY	3450	3/01	14	2.3	-	-
FRED BURR PASS	8000	2/28	39	9.9	29.5	23.5

Average based on 1958-72 period. A - Aerial observation; water content estimated.
SP - Snow Pillow observation; water content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Elevation	THIS YEAR Date of Survey	Snow Depth (Inches)	Water Content (Inches)	PAST RECORD Water Content (inches) Last Year	Average
FRIDAY HILL	4620	3/01	26	5.8	-	-
FROHNER MEADOWS	6480	2/22	13	3.2	6.9	-
FROHNER MEADOWS PILLOW	6480	2/22	SP	3.8	8.6	-
GARVER CREEK	4250	2/22	10	2.1	7.2	12.3
GARVER CREEK PILLOW	4250	2/22	SP	5.1	10.2	10.7
GIBBONS PASS	7100	2/23	24	5.2	24.1	20.5
GOAT MOUNTAIN	7000	2/28	16	4.8	11.1	10.3
GOLD CREEK LAKE	7200	2/24	20	4.0	20.0	13.8
GOLD STONE	8100	2/24	22	5.0	19.6	15.3
GRASSHOPPER	7000	2/24	17	4.2	4.0	5.1
GRAVE CREEK	4300	2/25	24	6.6	15.2	17.9
GRAVE CREEK PILLOW	4300	2/25	SP	7.2	16.1	-
GRIFFIN CREEK DIVIDE	5150	2/24	18	3.7	8.6	11.6
GRIZZLY PEAK	8400	3/01	32	8.2	15.6	13.5
HAND CREEK	5030	2/24	25	5.5	10.1	-
HAND CREEK PILLOW	5030	2/24	0	5.1	-	-
HAWKINS LAKE	6450	2/22	29	8.0	30.2	28.3
HAWKINS LAKE PILLOW	6450	2/22	SP	9.2	31.9	26.4
HEART LAKE TRAIL	4800	3/01	30	6.7	22.3	21.2
HEBGEN DAM	6550	2/25	26	5.9	14.7	10.8
HELL ROARING DIVIDE	5770	3/01	58	15.5	28.0	29.1
HERRIG JUNCTION	4850	2/25	41	11.0	-	-
HIGHWOOD DIVIDE	5650	2/22	29	8.6	8.7	-
HIGHWOOD STATION	4600	2/22	19	5.7	1.9	-
HOOD MEADOW	6600	2/25	25	4.8	11.8	9.8
HOODOO BASIN	6000	3/01	58	14.8	48.6	46.1
HOODOO BASIN PILLOW	6000	3/01	SP	14.0	47.2	45.8
HOODOO CREEK	5900	3/01	51	12.2	45.5	43.2
INDEPENDENCE	7850	2/28	40	8.3	21.8	17.5
INTERGAARD	6450	3/01	18	3.0	11.5	7.7
ISLAND PARK (ID)	6310	2/28	27	5.2	18.4	14.7
JACK CREEK	7500	2/23	11	2.2	6.0	4.8
JAHNKE LAKE TRAIL	7200	2/24	12	2.4	12.2	8.6
JOHNSON PARK	6450	2/28	19	3.8	7.4	7.4
KINGS HILL	7500	2/28	35	7.7	12.8	12.5
KISHENEHN	3890	2/26	9	1.4	7.3	9.3
LAKE CAMP (WY)	7850	3/01	17	2.8	11.3	8.2
LAKE CREEK	6100	2/28	14	3.1	9.0	6.2
LAKEVIEW CANYON	6930	2/28	14	2.4	9.8	11.1
LAKEVIEW RIDGE	7400	2/28	12	2.0	9.2	9.9
LATHAM SPRINGS (ID)	7650	2/25	34	8.2	35.0	27.9
LEMHI PASS	7480	2/25	12	2.5	11.2	7.9
LEMHI RIDGE	8100	2/25	15	2.9	13.6	8.9
LEMHI RIDGE PILLOW	8100	2/25	SP	3.5	14.4	-
LICK CREEK	6860	2/25	25	4.3	10.1	8.8
LICK CREEK PILLOW	6860	2/25	SP	5.9	10.3	8.3
LITTLE PARK	7400	2/24	40	9.2	17.5	14.4
LOGAN CREEK	4300	2/24	10	2.8	6.6	8.1
LOLO PASS PILLOW	5230	3/01	SP	8.3	30.0	-
LONE MOUNTAIN	8880	2/28	42	9.7	24.8	20.6

Average based on 1958-72 period. A - Aerial observation; water content estimated.
SP - Snow Pillow observation; water content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (inches)	Water Content (inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average
LOOKOUT (ID)	5250	2/24	36	10.0	31.2	32.7
LOST HORSE	5940	3/01	50	12.5	40.5	29.0
LOST SOUL	4800	2/24	17	4.2	15.0	16.6
LOWER TWIN	7900	2/22	24	5.6	21.0	18.6
LUBRECHT FLUME	4800	2/28	10	2.8	6.5	6.5
LUBRECHT FLUME PILLOW	4800	2/28	SP	3.0	5.5	6.2
LUBRECHT FOREST # 3	5450	2/28	14	3.3	6.6	7.0
LUBRECHT FOREST # 4	4650	2/28	5	1.2	2.0	3.7
LUBRECHT FOREST # 6	4040	2/28	4	1.2	3.4	4.3
LUBRECHT HYDROPLOT	4200	2/28	7	1.6	5.5	5.4
LUPINE CREEK (WY)	7300	2/28	16	2.8	12.9	9.8
MADISON PLATEAU	7750	2/25	24	4.4	25.5	18.6
MADISON PLATEAU PILLOW	7750	2/25	SP	7.4	26.4	20.0
MARIAS PASS	5250	3/02	18	4.3	15.7	16.9
MAYNARD CREEK	6210	2/23	37	8.8	13.8	16.9
MAYNARD CREEK PILLOW	6210	2/23	SP	6.4	9.5	10.1
MEADOW CREEK PILLOW	4000	3/01	SP	5.1	5.7	-
MIDDLE MILL CREEK	7850	2/28	27	4.9	15.0	13.7
MILL CREEK	7500	3/01	37	9.0	14.3	11.7
MINERAL CREEK	4000	2/26	18	4.4	16.0	18.4
MIRROR LAKE #6 (AL)	6600	2/28	23	5.6	11.7	10.3
MONUMENT PEAK	8800	2/28	53	13.4	31.5	24.4
MOULTON RESERVOIR	6850	2/28	12	1.4	-	-
MOUNT LOCKHART	6400	3/02	33	8.4	25.0	21.0
MOUNT LOCKHART PILLOW	6400	3/02	SP	8.3	22.2	18.7
MT. EISENHOWER #10 (AL)	5000	3/01	13	2.6	4.9	5.3
MUDD LAKE	7650	2/25	23	4.8	20.0	19.2
NEW WORLD	6900	2/23	35	7.4	15.4	13.1
NEWTON MOUNTAIN	5600	3/01	39	9.1	-	-
NEZ PERCE CREEK	6500	3/02	17	2.7	8.4	6.3
NOISY BASIN	6040	2/28	98	30.0	36.6	-
NOISY BASIN PILLOW	6040	2/28	SP	25.0	33.1	-
NOISY CREEK	3600	2/28	19	4.2	3.6	-
NORRIS BASIN (WY)	7500	2/27	21	4.0	12.5	9.9
NORTH FK. ELK CREEK	6250	2/28	22	5.2	12.7	10.5
NORTH FK. ELK CREEK PILL	6250	2/28	SP	4.8	13.7	10.9
NORTH FORK JOCKO	6330	2/24	75	23.4	43.9	42.5
NORTH MEADOW	7500	2/22	8	1.5	8.6	7.0
NORTHEAST ENTRANCE	7400	3/02	24	5.0	12.8	8.4
NORTHEAST ENTRANCE PILL.	7400	3/02	SP	5.1	12.2	8.3
NOTCH	8500	2/25	27	5.8	14.0	13.3
OPHIR PARK	7150	2/27	31	8.6	22.6	-
PETERSON MEADOWS	7200	3/01	19	3.7	12.4	8.3
PETERSON MEADOWS PILLOW	7200	3/01	SP	3.8	13.7	-
PICNIC GROUNDS	6200	3/02	12	1.8	4.6	4.1
PIPESTONE PASS	7200	2/28	8	1.2	7.6	4.5
PIPESTONE UPPER #2 (AL)	5300	2/28	20	4.2	6.5	8.5
POORMAN CREEK	5100	2/23	35	11.7	31.3	33.7
POORMAN CREEK PILLOW	5100	2/23	SP	11.5	29.6	28.7
PORCUPINE PILLOW	6500	2/25	0	6.5	-	-

Average based on 1958-72 period. A - Aerial observation; water content estimated.
SP - Snow Pillow observation; water content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Elevation	THIS YEAR: Date of Survey	THIS YEAR: Snow Depth (Inches)	THIS YEAR: Water Content (Inches)	PAST RECORD: Water Content (inches) Last Year	PAST RECORD: Water Content (inches) Average
PORCUPINE	6500	2/25	25	6.0	6.8	6.5
POTOMAGETON PARK	7150	2/24	25	5.6	14.2	11.8
RED MOUNTAIN	6000	3/01	25	5.2	17.8	17.4
RED TOP	5260	2/28	37	9.1	-	-
ROCK CREEK	5600	2/25	42	9.4	8.2	8.3
ROCK CREEK MEADOWS	8160	2/28	52	12.2	22.7	-
ROCKER PEAK	8000	2/23	18	5.1	16.8	13.7
ROCKER PEAK PILLOW	8000	2/23	SP	4.5	17.3	13.2
ROCKY BOY	4700	2/26	20	5.0	1.9	4.6
ROCKY BOY PILLOW	4700	2/26	SP	3.9	3.8	5.0
SACAJAWEA	6550	2/23	38	9.8	14.0	13.3
SADDLE MOUNTAIN	7940	2/28	32	7.4	27.2	22.7
SADDLE MOUNTAIN PILLOW	7940	2/28	SP	7.3	27.8	24.0
SAWTELL MOUNTAIN (ID)	8710	2/28	37	7.7	29.0	30.4
SENTINEL CREEK	8300	2/24	36	9.4	21.1	21.3
SHOWER FALLS	8100	2/25	56	14.7	24.5	21.6
SHOWER FALLS PILLOW	8100	2/25	SP	13.6	24.3	20.8
SILVER RUN	6630	2/28	13	2.9	5.3	-
SILVER RUN PILLOW	6630	2/28	0	2.4	-	-
SLIDE ROCK MOUNTAIN	7100	2/25	28	6.4	20.2	14.6
SMUGGLER MINE	6960	2/28	20	3.7	7.6	9.1
SOUTH FORK SHIELDS	8100	2/28	68	18.1	23.0	21.4
SPUR PARK	8000	2/23	40	12.2	18.6	19.6
SPUR PARK PILLOW	8100	2/23	SP	12.9	21.3	20.0
STAHL PEAK	6050	2/25	58	15.6	34.7	37.6
STAHL PEAK PILLOW	6050	2/25	SP	14.6	29.8	-
STEMPLE PASS	6600	2/27	22	4.5	11.9	9.8
STORM LAKE	7780	3/01	28	5.3	15.6	11.7
STUART MILL	6500	3/01	12	2.1	7.6	6.3
SUCKER CREEK	3960	2/26	4	.4	.0	-
SUGARLOAF	7350	3/02	24	5.5	-	-
SYLVAN PASS (WY)	7100	2/27	20	5.2	17.1	11.9
TARGHEE PASS (ID)	7000	2/28	24	4.5	16.0	13.5
TAYLOR ROAD	4080	2/26	19	4.4	.0	-
TEN MILE LOWER	6600	2/24	14	1.9	7.1	6.9
TEN MILE MIDDLE	6800	2/24	19	2.7	13.3	10.4
TEN MILE UPPER	8000	2/24	20	4.3	17.0	12.7
TEPEE CREEK	8000	2/28	21	4.5	16.2	14.3
TEPEE CREEK PILLOW	8000	2/28	SP	4.2	12.6	-
THUMB DIVIDE (WY)	7900	2/28	21	3.5	18.8	19.0
TIMBERLINE CREEK	8850	2/28	30	7.0	17.8	12.6
TRAIL CREEK	7090	2/25	11	2.1	10.0	7.1
TV MOUNTAIN	6800	2/27	30	5.5	19.0	17.0
TWELVEMILE CREEK	5600	3/01	41	9.8	26.7	18.8
TWELVEMILE CREEK PILLOW	5600	3/01	SP	8.2	22.3	16.4
TWENTY-ONE MILE	7150	2/25	22	5.0	20.3	16.1
TWIN LAKES	6510	3/01	64	16.4	47.2	37.2
TWIN LAKES PILLOW	6400	3/01	SP	15.9	47.8	37.7
VALLEY VIEW (ID)	6500	2/28	21	4.9	17.6	15.4
WALDRON	5600	3/02	17	3.4	10.0	11.2

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SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average
WALDRON PILLOW	5600	3/02	SP	4.6	8.3	11.9
WEASEL DIVIDE	5450	2/25	41	10.0	30.8	32.6
WEST YELLOWSTONE	6700	2/25	17	3.2	17.0	10.6
WEST YELLOWSTONE PILLOW	6700	3/01	SP	2.2	10.8	7.7
WHISKEY CREEK	6800	2/25	25	5.7	24.0	18.5
WHISKEY CREEK PILLOW	6800	2/25	SP	4.8	19.8	-
WHITE ELEPHANT (ID)	7700	2/28	30	6.0	22.9	-
WHITE MILL	8700	3/01	42	10.4	30.4	24.1
WHITE MILL PILLOW	8700	3/01	SP	11.0	28.1	-
WHITE PINE RIDGE	8850	2/25	8	1.4	6.2	4.7
WILLOW CREEK	6500	3/01	22	4.8	9.5	-
WRONG CREEK	5700	2/25	20	4.5	13.6	14.6
WRONG RIDGE	6800	2/26	28	6.8	20.5	19.3
LATE RECEIVED DATA						
Black Mountain	7750	3/08	30	5.0	-	-
Badger Pass	6900	3/06	52	17.6	45.3	37.0
Beaver Lake	5900	3/06	34	9.7	25.7	21.3
Blue Lake	5900	3/06	37	11.5	27.8	26.4
Darkhorse Lake	8600	3/07	34	10.0	32.8	24.2
East Fork RS	5400	3/07	12	3.6	7.0	6.7
Five-Bull	5700	3/06	9	2.2	5.5	7.0
Foolhen	8280	3/08	27	6.3	19.1	15.6
Freight Creek	6000	3/06	24	6.2	15.1	14.5
Gunsight Lake	6300	3/06	57	19.3	36.5	39.1
Kilgore (ID)	6200	2/28	15	3.0	9.1	10.1
King Creek Saddle	4550	2/27	19	4.7	-	-
King Springs	4150	2/27	16	4.2	-	-
Kit Carson (ID)	5020	3/07	19	5.0	-	-
Kiwanis Camp	3720	2/26	2E	0.2E	.0	-
Lolo Pass (ID)	5230	2/28	40	8.3	32.9	28.5
Many Glacier	4960	3/03	26	8.2	-	-
Many Glacier Pillow	4960	3/03	SP	7.7	-	-
Mission Mountain	5050	2/27	20	5.3	-	-
Moose Creek (ID)	6200	3/01	24	4.6	18.6	15.2
Nez Perce Camp	5580	3/07	23	6.5	15.6	13.0
Nez Perce Pass	6570	3/07	26	7.0	20.3	14.3
Old Faithful (WY)	7360	2/24	16	4.0E	20.3	-
Skalkaho Summit	7260	3/07	36	8.4	29.8	23.4
Slag-A-Melt Lake	8750	3/07	28	7.1	30.6	24.8
Spotted Bear Mountain	7000	3/06	30	8.2	16.3	14.7
Stryker Basin	6180	3/02	56	15.6	-	-
Stuart Mountain	7400	3/03	51	12.4	34.6	28.9
Trinkus Lake	6100	3/06	83	29.0	38.2	39.9
Twin Creeks	3580	3/06	22	6.4	11.6	12.3
Upper Holland Lake	6200	3/06	66	21.2	33.8	33.7
Wolverine (WY)	7650	2/28	19	4.0	11.9	-

Average based On 1958-72 period. A - Aerial observation; water content estimated.
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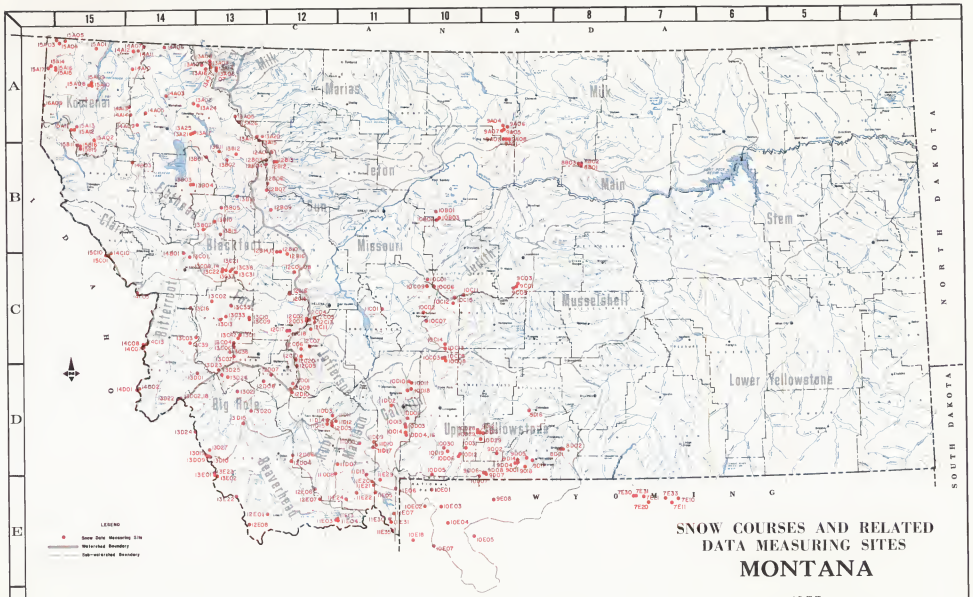

SNOW COURSES AND RELATED DATA MEASURING SITES

MONTANA

1977

20 0 20 40 60 80 MILES

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INDEX to MONTANA SNOW COURSES and DATA SITES

SNOW COURSES
COLUMBIA RIVER BASIN

KOOTENAI RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Course 1/	Measure Series 2/	Meas. By 3/
Bald Eagle Peak	15411	5700	4	27N	33W		3,4,5,10,6	1
Banfield Mountain	15429	5600	4	32N	30W	R,P,T,W	2,3,4,5,10,6	1
Bear Mountain	15431	5400	31	29N	31W		3,4,5	1
Burma Skimay	15433	5600	31	31N	30W		3,4,5	1
Burma Trail	15403	3840	2	25N	32W	M	3,4,5,10,6	1
Bristow Creek	15434	5200	7	32N	28W		3,4,5,10,6	1
Broad Creek Timber	15413	5000	12	30N	28W		3,4,5	1,2
Bull Mountain	15414	5600	12	30N	31W		3,4,5,10,6	1
Burke Creek	15404	5400	28	37N	33W		3,4,5,10,6	1
Peach of July	15412	3450	19	24N	33W		1,2,3,4,5,10,6	2
Priest Hill	15416	4410	19	36N	27W		1,2,3,4,5,10,6	1
Carver Creek	15402	4150	18	37N	32W	R,P,T,W	2,3,4,5,10,6	1
Cedar Creek	15405	4150	18	37N	32W	R,P,T,W	2,3,4,5,10,6	1
Meadow Lake	15417	4450	19	37N	33W	R,P,T,W	2,3,4,5,10,6	1
Keeler Creek	15429	1300	25	30N	33W		3,4,5	1
Kelly	15418	3360	3	24N	31W		Monthly	2
Purgatory Lake R.S.	15419	3360	3	24N	31W	M,WSC	Monthly	2
Newton Mountain	15417	5400	23	36N	34W		1,2,3,4,5,10,6	1
Pinnacle Creek	15413	5100	5	37N	31W	R,P,T,W	2,3,4,5,10,6	1
Raven	15409	5000	7	28N	29W	M,WSC	Monthly	2
Rogers Mountain	15410	5200	3	28N	31W		3,4,5	1
Sad Toy	15424	5100	14	34N	34W		1,2,3,4,5,10,6	1
Sand Peak	15419	4020	5	26N	25W	R,P,T	2,3,4,5,10,6	1
Summit Divide	15407	5450	26	37N	29W		3,4,5,10,6	1

FLATHEAD RIVER

Bacon Peak	16403	5130	11	24N	23W		3,4,5	1
Bad Medicine	16404	5400	11	24N	23W		3,4,5	1
Big Creek	13861	4755	7	21N	18W		3,4,5,6	1,2
Camp Misery	13862	4440	30	26N	18W		3,4,5	1
Desert Mountain	13405	5850	35	31N	17W	H	1,2,3,4,5,6	1,2
Emery Creek	13434	4350	20	31N	18W	R,P	3,4,5	1
Fatty Creek	13435	4150	20	31N	18W	R,P,T	2,3,4,5,6	1
Flattop Mountain	13419	6100	12	33N	19W	R,P,T	3,4,5	1,2
Griffin Creek Divide	16409	5150	11	28N	23W		3,4,5	1
Hand Creek	16410	5100	11	28N	23W		3,4,5	1
Hand Creek	16414	5025	4	28N	23W		3,4,5	1,2
Hell Roaring Divide	16415	5775	35	32N	25W		1,2,3,4,5,10,6	1
Holbrook	13813	4250	18	21N	19W	A	1,2,3,4,5,6	1
Kishenehn	14438	3690	14	37N	21W		3,4	2
Lion Mountain	16417	5400	29	29N	23W		3,4,5	1
Mineral Creek	13414	4000	29	31N	17W		3,4,5,6	1
Noisy Basin	13435	4640	23	28N	19W	R,P,T	3,4,5	1,2
Noisy Creek	13431	3950	35	28N	19W		3,4,5	1,2
North Fork Jocko	13802	4230	3	17N	17W		1,2,3,4,5,6	1,2
Northeast Lone Mountain	13803	4170	28	21N	19W	A	1,2,3,4,5,6	1
Trickham Lake	13801	4100	9	25N	17W		3,4,5	1
Twin Creeks	13811	3580	35	26N	18W	A	1,2,3,4,5	1
Upper Morrison Lake	13809	4190	28	29N	19W		3,4,5	1

CLARK FORK RIVER

Basin Creek	12809	7180	31	10	7W	P	1,2,3,4,5,6	1
Bear Creek	12813	7000	7	10	8W	P,P,T	1,2,3,4,5,6	1
Cacheunion	12813	5600	7	8S	14W	P,P,T	1,2,3,4,5,6	1
Copper Bottom	12818	5200	13	15S	8W	R,P,T	3,4,5	1
Copper Creek	12813	6100	7	11S	9W	R,P,T	3,4,5	1,2
Copper Creek	12818	5700	1	12S	9W	R,P,T	3,4,5	1,2
Copper Lake Creek	12815	6100	5	12S	9W		3,4,5	1,2
Cottonwood Creek	12817	6400	24	11S	8W		3,4,5	1
Crypto Hill	13809	4200	12	20N	16W		1,2,3,4,5	1,2
Dempsey Basin	12814	6100	24	11S	9W		1,2,3,4,5,10	1
Gin Hill	13813	4440	24	11N	8W	P	1,2,3,4,5	1
Hi Ontario Mine	13809	7880	23	8N	10W		3,4,5	1
Fred Burr Pass	12811	8080	12	6S	11W		3,4,5	1
Cold Creek Lake	13815	7100	14	8N	12W		3,4,5	1
Lookout Pass	13810	4725	19	48N	3W		1,2,3,4,5,6	1
Meadow Basin	13812	6600	17	14S	27W	R,P,T	1,2,3,4,5,6	1
Meadow Creek	13821	5990	16	14S	27W		1,2,3,4,5,6	1
Lower Willow Creek	13815	4745	5	9N	14W	P,WSC	Monthly	2
Lubrecht Forest	13814	4180	15	13N	15W	M,WSC	Monthly	2
Lubrecht Flume	13838	4480	15	13N	16W	M	3,4,5	2
Lubrecht Forest No. 3	13811	5650	19	13N	14W		1,2,3,4,5	8
Lubrecht Forest No. 4	13812	5400	19	13N	14W		1,2,3,4,5	8
Lubrecht Forest No. 8	13838	4840	11	13N	15W		1,2,3,4,5	8
Lubrecht Petrolyst	13837	4200	32	13N	14W		1,2,3,4,5	8
Marshall Mountain	13809	6750	25	13N	20W		1,2,3,4,5,6	1
North Fork Elk Creek	13701	4810	28	13N	13W	R,P,T	1,2,3,4,5,6	1
Ophir Park	13816	7150	7	8N	12W	R,P,T	1,2,3,4,5,6	1
Putarmah Meadow	13736	7200	2	4S	14W	R,P	1,2,3,4,5,6	1
Rocky Lake R.S.	13819	4050	31	17N	15W	M,WSC	Monthly	2
Rocky Mountain	13818	4200	31	17N	15W	M	3,4,5	2
Silas Buck Mountain	13802	7180	35	10N	19W		1,2,3,4,5,6	1
Storm Lake	13837	7781	19	4N	13W		1,2,3,4,5,6	1
Stuart Mill	13836	4800	19	18N	13W		3,4,5	1
Sweet Mountain	13835	7400	6	14N	19W		3,4,5,10,6	8
Thompson	13838	4440	33	14N	15W		3,4,5	2
TV Mountain	13821	6850	33	15N	19W		1,2,3,4,5,10,6	8

BITTERROOT RIVER

Ambrose	13838	6480	28	9N	18W		3,4,5	1
Daly Creek	13838	5760	16	8N	18W	P	3,4,5	1
Daly Creek R.S.	13838	5760	16	8N	18W		Monthly	2
Gibbons Pass	13801	7100	4	2N	19W	R	1,2,3,4,5,6	1,3
Lolo Peak	14401	5250	11	10N	20W	H	1,2,3,4,5	1,2
Nez Perce Pass	14407	5965	5	4N	21W		1,2,3,4,5,6	1
Nez Perce Camp	14402	5580	19	4N	21W	P	3,4,5	1
Rocky Point	14408	5760	5	5N	21W		3,4,5	1
Saddle Mountain	13822	7840	5	2S	19W	R,P,T	1,2,3,4,5,6	1
Twelvemile Creek	14413	3690	34	9N	23W	R,P,T	1,2,3,4,5,6	1
Twin Lakes	14408	6310	30	6N	19W	R,P,T	1,2,3,4,5,6	1

ST. MARY RIVER

Iceberg Lake No. 3	13403	5600	1	30N	17W		3	3,4
Josephine Lower No. 4	13414	4900	22	33N	16W		3	3,4
Navy Glacier	13427	4961	10	33N	17W	R,P	3,4,5	3,4
Road Allen No. 2	13407	5700	27	35N	16W		3	3,4
Piegan Pass No. 6	13406	5500	27	35N	16W		3	3,4
Stoneglacier No. 8	13408	5600	36	36N	17W		3	3,4

MISSOURI RIVER BASIN

BEAVERHEAD RIVER

Bangle Springs	13908	6810	4	18S	11W	P	3,4,5	1
Bloody Dick	13910	7450	22	16S	11W	P,P	3,4,5	1
Carter Creek	13904	7480	22	8S	7W	P	3,4,5	11
Christensen Ranch	13924	6080	34	7S	7W	P,WSC	Monthly	11
Fritz Creek	13911	7000	22	16S	11W	P	3,4,5	1
Fritz Park Ridge	13913	7850	22	16S	12W		3,4,5	1
Gold Creek	13906	8100	21	8S	14W		3,4,5	1
Lakeview	13913	6700	23	14S	9W	M,WSC	Monthly	10
Lakeview Canyon	11924	6930	26	14S	9W		1,2,3,4,5,3	10
Lakeview Ridge	11924	7500	26	14S	9W		1,2,3,4,5,3	10
Lemhi Pass	13801	7400	3	10S	15W		3,4,5	1
Lemhi Ridge	13913	8100	4	10S	15W	R,P,T	3,4,5	1
Upper Fritz	13913	7600	23	16S	11W		3,4,5	1
White Pine Ridge	13902	8950	10	16S	9W		3,4,5	1

RUBY RIVER

Bourbon Lakes	11914	8810	5	9S	3W		3,4,5	1,12
Cottonwood Meadow	11908	8600	16	9S	3W		3,4,5	1
Hidden Lake	11907	8400	34	8S	3W	R,P,T	3,4,5	1
Middle Fork Creek	11911	7950	4	10S	3W		3,4,5	1,12
Notch	11836	8100	18	11S	4W		3,4,5	1
Snaggler Mine	13903	6960	24	6S	4W		3,4,5	1,12

BIG HOLE RIVER

Abundance Lake	13920	8800	7	3S	11W		3,4,5	1
Big Hole Pass	13917	8600	7	3S	11W		1,2,3,4,5,6	1
Calvert Creek	13914	7400	5	4S	11W	R,P,T	3,4,5	1
Deerborne Lake	13919	8600	4	8S	14W		3,4,5	1
Fishtail Lake	13919	8600	33	7S	14W		1,2,3,4,5	1
Parsian	11921	8180	11	9S	13W		3,4,5	1
Schabe Lake Trail	13927	7280	24	7S	13W		3,4,5	1
Todd Lake	13915	7400	34	3S	11W		3,4,5	1
Poltanna Creek	13923	8350	3	2S	15W		4,5	1
Sharp-Steele Lakes	13924	8750	4	5S	17W		3,4,5	1

JEFFERSON RIVER

Berry Meadow	13707	7980	6	7S	7W		3,4,5	1
Bloody Dick Creek	13708	7150	19	10S	6W	P	1,2,3,4,5,10	1
Fish Trap	13715	7000	13	7S	7W		1,2,3,4,5,10,6	14
Nez Perce Creek	12710	6500	14	4N	4W		3,4,5	6
Pine Grove Hill	13711	7200	33	6S	7W		3,4,5	1
Pleasant Pass	12701	7750	25	1S	3W		1,2,3,4,5	4
Rocker Peak	12711	8300	17	3S	3W	R,P,T	3,4,5	1

MADISON RIVER

Black Bear	11833	7930	27	15S	5E	R,P,T	1,2,3,4,5,10,6	1,2
Cell Road	12307	8050	21	8S	2W	P	3,4,5	1
Hell Roaring	11825	8100	7	14S	5E		3,4,5	1
Galyan Pass	11825	6650	12	15S	5E		1,2,3,4,5	1
Jack Creek	11901	7500	13	6S	1E		1,2,3,4,5	1
Lake Creek	11833	8100	13	14S	1E		1,2,3,4,5,6	1
Lower Twin	11911	7900	12	4S	2W	P	3,4,5	1
Madison Buttes	11911	8100	12	4S	2W	P,T	1,2,3,4,5,10,6	1
North Meadow	11903	7500	28	3S	2W		3,4,5	1
Pennington Park	11831	7120	33	10S	3E		3,4,5	2
Sawmill Creek	11834	7800	13	12S	3E		3,4,5	1
Tepee Creek	11834	7980	13	12S	3E	R,P,T	3,4,5	1,2
Water Tellowstone	11907	6780	36	10S	3W	R,P,T	1,2,3,4,5,6	1
Whiskey Creek	11838	8040	19	14S	7E	R,P,T	1,2,3,4,5,6	1

GALLATIN RIVER

Arch Pella	10914	7300	3	5S	6E		1,2,3,4,5,6	1
Bear Basin	11908	8150	31	6S	5E	P	3,4,5	1
Big Sky	11917	7780	30	6S	5E		1,2,3,4,5	1
Buck Peel	11907	7700	19	6S	4E	P,P,H	1,2,3,4,5,6	1
Carrot Basin	11929	9000	18	8S	6E	P	1,2,3,4,5,6	1
College Site	11902	6856	18	2S	5E	M,WSC	Monthly	1
Hebgen Lake	11908	6400	28	12S	1E		1,2,3,4,5,6	1
Bond Meadow	10905	6600	20	4S	4E		1,2,3,4,5,6	1
Lick Creek	10915	6890	10	4S	6E	R,P,H	1,2,3,4,5,6	1
Little Park	11908	7800	13	6S	5E		1,2,3,4,5,6	1
Monument Creek	10918	6210	19	1S	7E	R,P,T	1,2,3,4,5,6	1
Mount Ellis	11907	8100	24	6S	4E	R,P,T	1,2,3,4,5,6	1
Shower Falls	10916	8100	30	5S	4E	R,P,T	1,2,3,4,5,6	1
Taylor Peaks	11913	8500	26	9S	2E	P	4	1
Tomahawk Ridge	11906	7130	1	11S	3E	R	1,2,3,4,5,6	1

MISSOURI RIVER MAIN STEM

Big Casino	10903	5180	10	19N	9E		1,2,3,4,5	1,12
Cherokee Mountain	11911	6700	2	6N	1E		1,2,3,4,5	1
Cherokee Reservoir	11915	6700	2	6N	1E		1,2,3,4,5	1
Deadman Creek	10929	6438	23	31N	8E	R,P,T	1,2,3,4,5,6	1
Elk Park	10937	6800	25	13N	4E		1,2,3,4,5	1
Pinkney Meadows	10913	6480	23	8N	5E	R,P,T	1,2,3,4,5	1
Sheridan Creek	10913	6400	23	8N	5E		1,2,3,4,5	1
Sighmound Divide	10902	6610	13	8N	4E	P	1,2,3,4,5	1,12
Sighmound Station	10901	6600	23	8N	4E		1,2,3,4,5	1,12
Spring Hill	10911	6400	23	8N	5E		1,2,3,4,5	1,12
Stampede Pass	10931	6480	28	7N	7E	R	1,2,3,4,5	1
Two Mile Lower	10932	8600	12	8N	6W		1,2,3,4,5	1,5
Two Mile Middle	10933	8400	15	8N	6W		1,2,3,4,5,6	1,5
Two Mile Upper	10934	8900	19	8N	5W	R,P,T	1,2,3,4,5	5

TETON-MARIAS-SUN RIVERS

Badger Pass	13615	6900	6	27N	12W	A	1,2,3,4,5	1
Blue Lake	13620	7800	23	28N	12W	A	1,2,3,4,5	1
Dupuyer Creek	13621	7100	33	29N	13W		3,4,5	1
Pine Hill	13609	7180	23	28N	13W		3,4,5	1
Pratgle Creek	13601	6000	13	26N	13W		3,4,5	1
Red Mountain	13603	6200	31	26N	13W		3,4,5	1
Varina Pass	13605	5250	31	29N	13W	M	1,2,3,4,5	1
Mount Lockhart	12812	8400	18	25N	9W	R,P,T	1,2,3,4,5,6	1
Pike Creek	13636	5850	5	29N	17W	R,P,T	3,4,5	1
Valdora	12813	5900	17	25N	9W	R,P,T	1,2,3,4,5,6	1
Wapiti Creek	13611	6400	17	27N	11W	P	3,4,5	1
Wrong Ridge	13803	6450	19	21N	19W		3,4,5	1

JUDITH RIVER

Big Snowy	9005	7150	25	12N	17E		3,4,5	1
Big Snowy Lake	9005	7150	25	12N	17E	P	3,4,5	1
Buck Creek	9003	5800	7	12N	18E		3,4,5	1
Spur Park	10906	8100	30	12N	9E		1,2,3,4,5,6	1

MUSSELSHELL RIVER

Delay Peak	10913	7800	36	11N	11E		3,4,5	2
Eagle Creek	10913	7500	7	9N	10E		3,4,5	2
Forest Lake	10914	6400	26	6N	10E		3,4,5	2
Haymaker	10913	6850	16	11N	11E		3,4,5	2
Johnson Park	10913	6450	34	10N	11E		3,4,5	2

MILK RIVER

Beaver Creek	9405	3810	31	29N	16E	M,WSC	Monthly	1
Bear Paw Ski Area	9402	5730	21	28N	16E	P	1,2,3,4,5	1,2
Beaver Creek	9403	5100	24	32N	16E	P	1,2,3,4,5	1,2
Big Creek Reddie	8903	4750	35	35N	24E		1,2,3,4,5	5
Big Sandy	8903	4750	35	35N	24E		1,2,3,4,5	5
Elmeria Camp	9402	5130	34	31N	15E		1,2,3,4,5	1
Mission Mountain	8901	5030	13	32N	24E	P	1,2,3,4,5	5
Mt. Haystack	9402	5400	13	32N	16E	P	1,2,3,4,5	1,2
Sunset Creek	9404	3860	31	28N	16E		1,2,3,4,5	1,2
Taylor Road	9407	4080	19	28N	16E	P	1,2,3,4,5	1,2

UPPER YELLOWSTONE RIVER

Bald Ridge	10905	7150	11	4S	10E		3,4,5	1
Battle Ridge	10913	8025	32	7S	9E		3,4,5	1
Bear Creek	10914	7200	29	6S	10E		3,4,5	1
Bee Canyon	10931	6750	28	8S	10E		3,4,5	1
Mount Hensley	10929	9550	6	9S	14E	P,WSC	Monthly	13
Camp Basin	10906	8100	6	9S	14E	P	1,2,3,4,5,6	1
Cole Creek	9918	7950	26	7S	19E	R,P	1,2,3,4,5,10,6	1,3
Cooney Reservoir	9907	4150	34	5S	19E		1,2,3,4,5,6	1
Cooke Station	9901	6150	19	9S	17E		1,2,3,4,5,6	1
Lennie Mountain	10905	8400	22	9s	8E		3,4,5	1
Lennie Peak	9906	9100	11	9S	14E	R,P,T	1,2,3,4,5,6	1
Grizzley Park	9905	8400	26	7S	19E		1,2,3,4,5,6	1,2
Hellroaring	9906	8400	26	7S	19E		1,2,3,4,5,6	1,2
Mill Creek	9919	7350	4	7S	20E		3,4,5	1
Norwegian Peak	10912	8800	16	7S	12E		3,4,5	1
Pine Creek Campground	9907	5100	31	5S	19E	P,P,R,T	1,2,3,4,5,6	1
Pitcher Pie Lower	9915	6200	1	5S	16E	P	1,2,3,4,5,6	1,3
Pitcher Pie Middle	9912	7350	1	5S	16E		1,2,3,4,5,6	1,3
Pitcher Pie Upper	10909	8100	32	4S	16E	P	1,2,3,4,5,6	1,3
PMC Orchard	8902	3700	35	6S	23E	P,WSC	Monthly	1
PMC Temperatures	8902	3700	35	6S	23E	P,WSC	Monthly	1
Porcupine	10905	6300	18	6S	10E	P	3,4,5	1
Sarajevo	10910	6550	36	2S	6E		3,4,5	1
Sawtooth	9918	6420	11	8S	19E	R,P,T	3,4,5	1
South Fork Shields	10904	8190	13	4S	10E		3,4,5	1
Timberline Creek	10906	8100	13	4S	10E		3,4,5	1
West Rosebud	9902	7360	1	7S	20E		1,2,3,4,5,6	1
White Hill	9908	8700	18	9S	15E	R,P,T	3,4,5	1,2
Willow Creek	9917	6300	31	7S	20E		1,2,3,4,5	1,2

1/ Blank refers to snow course only at site
0 = snow pillow alone
P = precipitation gage alone
M = well minimum gage alone
W = water temperature alone
H = wind alone
A = aerial marker alone
WSC = on snow course at site

2/ Numerals 1,2,3,4,5,6,10,6 refer to snow course or aerial marker measurements on January 1, February 1, March 1, April 1, May 1, and June 1. Most snow pillows, temperature, and wind run are daily readings, most precipitation gages and well minimums are read monthly.

3/ Numerals refer to agency making the snow surveys as follows:
1. Soil Conservation Service
2. Power Services
3. Montana Power Company
4. Montana Power Company
5. Bureau of Indian Affairs
6. National Park Service
7. NPO Agricultural Experiment Stations
8. University of Montana School of Forestry
9. Department of Energy, Mines and Resources
10. Montana Department of Fish, Wildlife and Parks
11. Private Companies
12. Montana Association of Conservation Districts
13. Montana Department of Fish and Game
14. Butte Water Company

LEGEND

Agencies and Organizations Cooperating in Montana Snow Surveys

GOVERNMENT AGENCIES

Canada:

Water Survey of Canada, Calgary, Department of the Environment
Water Resources Service, Department of Lands, Forests and Water Resources, British Columbia
Alberta Environment, Edmonton, Alberta

Federal:

Department of the Army
  Corps of Engineers
U.S. Department of Agriculture
  Forest Service
  Soil Conservation Service
U.S. Department of Commerce
  NOAA, National Weather Service
U.S. Department of the Interior
  Bonneville Power Administration
  Bureau of Indian Affairs
  Bureau of Reclamation
  Fish and Wildlife Service
  Geological Survey
  National Park Service

STATE

Montana Association of Conservation Districts
Montana Department of Fish and Game
Montana Department of Natural Resources and Conservation
Montana State University - Agricultural Experiment Station
University of Montana - School of Forestry

PRIVATE

Montana Power Company
Butte Water Company
The Anaconda Company

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

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